2 3 4

SERIALS

7th and Alemeda stn.

A.F. Krenke 1903 at Los Angeles. downtown office 1903

Watermelon Freak at the 7th and Alameda st Statition 1904.

5

Pacific Wireless Company at Mt. Tamalpias
Feb 22, 1906 just before the earthquake in S.F.

Construction crew left Krenke right Mr. Braford making the coil form.

6 ETC

Pacific Wireless Company

Installation crew at Mt. Tamalpias Feb. 22, 1906 just before the earthquake.

VIA AIR M
VIA AIR M

7

United Wireless Stations

Photo by Gordon Haw. Right Eden Haw in the shop at Seattle.

The top floor of the building is occupied by the machine shop. Here the material in the rough is taken and the work of turning it into the various devices for sending aerogram is started

The sedon floor is used as an office drafting room and testing room. On this floor also are located the nickel plating and polishing departments. A general store room and shipping department occuypy the remainder of the floor. The wireless instrucments are set up and teste t thorougly before going to the shipping room. The testing department is one of the most interesting places in the establishment . It is equipped with two memmoty switchboards, from both direct and alternating current can be obtained, of almost any voltage desired. Every piece of apparatus is sent to the t sting room and given what is know as the break down test. f and deft is discoverd the instrument is returned to the manufacuring department.

VIA AIR

9 10 11

United Wireless Station PC

Astoriam Oregon 1907 Alfred Ferland first operator in charge.

Oregon historical society

VIA AIR M

12 13

United Wireless Stations

Eureka PM 1911-12 2 KW Spark and Heliz.

VIA AIR M

14 15

United Wireless Stations.

St. Helens Oregon "KE"

Left to right Cliff Watson, Jess B. Wee and Bill Vetter 6/21/1910

Cliff writes home:

VIA AIR

Dear Mother and Father: This is a picture of the station. The engine room house is on the left and the operating room on the right. To the left, Watson the present nite man, Weed the day man andVetter the former nite man. Am well and like the work fine.

Cliff.

Unknown op in doorway 1909

16

United Wireless Station PX

Marshfield , Oregon.

The Marshfield station changed its name to Coos Bay, Oregon. Ships coming up the coast losing contact with Eureka PM shifted to copy PX until they could reach PC at Astoria on the Columbia River.

VIA AIR

17

United Wireless Station

San Pedro "PJ" in 1911

VIA AIR

United Wireless Aerogram forms.

VIA AIR

United Wireless Station Shipboard Installation.

Bank of 12 Leyden jars on top of which is a heliz shown at right,
Open core transformer underneath. Control Panel type B tuner loose coupler and
antenna switch in left and center. Anchor gap above clock

photo Nel Nelson Seattle in charge 1907-10

VIA AIR M

Marconi Wireless Telegraph Station
~~United~~ Wireless Station PB at Ketchikan, Alaska 1912

VIA AIR M

21 22

Pacific wireless Co. Station Avalon Catalina Island 1903

A.F. Krenke standing in the doorway

VIA AIR

23 24

1KPH 1916

VIA AIR

25

Ship

Sailing Ship Archer

Archer at the dock in Roche Harbor , Wash. The Archer ca ried lime made at Roche Harbor and was one of the earliest vessels on t e West Coast to carry wireless equipment.

photo T.C Smith Seattle

VIA AIR

Sailing ship Ar ner at sea 1910

26

U.S. Army Stations

Norton Sound Alaska.

VIA AIR

27

U.S. Army stations

Northern Commercial Company Plant St. Michaels, Alaska.

U.S. Wireless Telegraph station

VIA AIR M

25

U.S. Army Signals

Nome Alaska, 1912

VIA AIR M

29

Equipment

Mineral Detector Holder Mfd. by E.I. Co.

This little device was used about 1905 to hold such minerals as carborundum, molybdenum and silicone for detectors. The pressure on the surfaces could be varied by adjusting the thumb screws.

VIA AIR

30

Equipment - Murdoc 1 KW Rotary Spark gap transmitter.

VIA AIR

31

Equipment

Kilburn and Clark Spark set 1917

VIA AIR

32 33 34

Montana Power Co.

Station at Lewistown, 1916. Thompson Falls.

J.C. Dow.

VIA AIR

35

Montana Power Co.

Great Falls , Mont. ~~KXx~~ KLZ Rainbow Plant. This was one of the chain of stations 300 miles p apart connecting Lewiston, Butte, Rainbos and Thompson Falls. The stations were used for power dispatching. World War one closed them down. Engineer in charge was Cliff Watson. View show a 2 KW rotary gap, glass plate condenser and a Moorehead tube receiver.

VIA AIR

36

Montana Power Co. Thompson Fall, Transmitter 1916.

Installed by Watson and Hallock. 20,000 volts and a rotary spark gap on 1600 meters.

VIA AIR

31 30

Marconi Wireless Marshall Calif. Receiving.

VIA AIR

39

Northwestern Power Com.

Station PNW Portland, Oregon. May 1914. Installed by Hallock and Watson.

VIA AIR

40 (41)

United Wireless Co.

Installer G.L. Mellegan

(D.A. Cameron)

VIA AIR

42

Operators

H.C. Capwell

Operator on the SS City of Seattle Pacific Coast SS Co.

VIA AIR M

43

Operators

Reggie Baer right and Bill Erick left on the SS Maui, Matson Line in 1920. This was Baer's last run for 20 years until WWII.

VIA AIR M

44

Operators:

Reggie Baer left

Marsteller, right

1915 aboard the SS China, China Mail Co.

VIA AIR M

45

Operators

Reggie Baer and Bill Erick

SS President 1911
Pacific Coast SS Co.

VIA AIR

46

Operators

Charles B. Cooper

Seated on the first radio-tail-e-hone at the Leadville, Colorada United Wireless Station 1905. "CBC" in 1904 demonstrated wireless for Dr. Lee DeForest at the St. Louis Exposition. Later was an installer for United and then organized the Ship owners Radio Service in Seattle, Wash. Now retired on Long i Island Well known on the West Coast and one of the realy old time wireless men.

VIA AIR M

47

Operators

Syd Fass on the SS San Juan, 1912

VIA AIR

48

Operators

Left to right: Jim Crouse, Walton W. Mee and
Ralph Norgard right. They were on the SS General Lee in 1935.

VIA AIR

49

Operators

H. Campbell at Eureka "PA", July 23, 1912

VIA AIR

50

Operators

Malarin, 1911

Hiring agent for the Marconi Co. S.F. Calif.

VIA AIR

51

Operators

Orin Mock, 1912

Aboard the SS Centralia a coastwise lumber schooner.

VIA AIR

52

Operators

Marty Principe, 1918

Matson Liner SS Enterprise.

VIA AIR

53

Operators

Syd Fass on the SS San Juan 1912

Marstella
SS Clunia 1915

VIA AIR

54 55

Operator Cliff Watson

See story on Watson for information

VIA AIR

56

Operators

Joe Hallock

SS Alaska, 1917

VIA AIR

57

Operators

Walter Tease: Born in Portland and started going to sea with SORS in 1916. Was mostly on Alaska steamship company ships until he retired in 1934.

VIA AIR

A 58

Operators

George Hubbard

1911

George S. Hubbard wireless operator posses the distinction of having flashed the first alarming SOS signals from the Pacific Mail Liner Asia which left her bones on Finger Rock, off the China coast in 1911

VIA AIR

Hubbard was on duty when the fatal crash came that imprisioned the Asia on the jagged rocks. Patience and persistence in attention to his key and sounder soon rewarded him that his siggals of SOS had been received in Shanghai. Soon speedy relief reached the hundreds of passengers left marooned on a small and desolate island, surrounded by a mob of maddened and bloodthirsty Chinese pirates who would not stoop to anything to gin much coveted treasure believed to have been placed onboard the liner before her departure from Hong Kong. Hubbard later served on te Sierra and Beaver.

59

Operators

Dick Johnstone standing in front of KHP masts, April 1917. When the U.S. Navy took over the coastal stations. There are two masts just the same heigth 250 feet and spaced 500 feet apart. The insulators were made of Oak and two feet long. Dick was on duty at KPH in 1916 when lightening hit this very mast and it knocked off 25 feet of it and burned all the receiving equipment. Marconi Wireless Co. owned the station at this time. During the war one KPH changed to NWO and went back to KPH in 1919.

VIA AIR M

During the storm KPH was out. Cecil Cronkhite handled tfk from his station at the Presidio.

AA 60

Operators

Wireless operator Jacobson on the SS Norwood which ran aground during a snowstrom in the inland passage to Alaska.

VIA AIR M

Operators

Cliff Watson at the Dwey Mine
near Grangerville, Idaho August 1906
Schmidt-Wilkes phones, silicone detector
and a three slide tuner "syntonizer"

VIA AIR

Operators

Cliff Watson at the Electricians ball, Thomspon Falls Mont.
Dec. 1916. Cliff demonstrating a Tesla Coil powered
from the stations power supply.

VIA AIR M

Operators

J.B

W.A. Vetter and Wood. Operators on the SS Bear, 1910
at the Portland Exposition.

VIA AIR M

Vetter 4731 17th st. S.F. Bill operated at KE, St. Helens, Ore. 1911-12

64

Operators

Front row left to right: J.S. Philbrick, G.S. Hubbard, W.J. Manahan
Back row left to right: J.B. Wood, E.D. Stevens, W.A. Vetter.

VIA AIR

65

operators

Herb Slocum Naval Engineer onboard the USS California

VIA AIR M

66

Operators

Right Jack Wiehr second op on the ~~Admiral~~ Admiral Schley 1912

VIA AIR M

67

Ships

SS Asia , April 23, 1911
River Pirates boarding her.
See George Hubbard's story.

VIA AIR

68

Early Amateur Stations

ES Operated by Eugene Skinner in 1909

Main contact, Pacific Coast SS Co. and local contacts.
Sometimes Navy ships in Magdalena Bay 500 miles souther
were contacted in 1910

VIA AIR M

69

Ships

SS Senator, 1912

VIA AIR M

Many an old timer will remember the "Cigarette of the Pacffic"
Called this because of the tall stack which occassionaly caught
on fire and then burned up the wireless antenna.

During the day time the Senator could contact shore when she was
300 miles at sea. Signals did not fade out so rapidly over the water. At
nite she could contact Astoria, Ore. from Unimak Pass beyond the
Bering Sea.

Ships

SS Humbolt, 1913

VIA AIR

Ships

SS Admiral Evans steaming up the West Coast.

VIA AIR M

Ships

Tug Tatoosh

VIA AIR M

Ships

Tug Goliah in Arutan Bay , Alaska.
At that time she with her sister ship were the most powerful tugs on the Pacific Coasts. She was taken over by the navy in 1918 and last heard from convoying the surrendered German Fleet into Scapa Flow.

VIA AIR

Ships

SS Oliver Olson

Many young wireless operator made his first trip on this old coast-wise lumber schooner traveling from the Northwest to San Diego, Calif. around 1910-1912

VIA AIR

Ships

Lumber Schooner J.B. Stetson, 1911

VIA AIR

Ships

SS Admiral Schley, 1913

VIA AIR

Ships

USS Saturn in Alaska during radio expedition about 1918.

VIA AIR

Ships

SS Starr Tied up at the dock in Alaska.
Dexter Bartlett operator at the time.

VIA AIR

Ships

SS Victoria one of the early ships to carry wireless.
She ran between Seattle and Nome, Alaska.

VIA AIR

Ships

SS Lansing

VIA AIR

Ships

SS Ventura

VIA AIR

82

Ships

SS China, 1917

VIA AIR

83

Ships

SS Santa Rosa wrecked near Pount Arguello
July 7, 1911

VIA AIR

84

Ships

SS Washtenaw , 1910

VIA AIR

45

Ships

SS Pectan Union Oil Tanker

VIA AIR

Ships

SS Norwood - deck scene.

SS Norwood Ran aground during a snowstrom in the inland passage to Alaska.

J.F. Hammel Operator.

VIA AIR

47

Ships

SS Victoria

Stuck in the ice.

SS Victoria "WAD" launched in 1870 for the Cunard Line was Queen of the Atlantic for many years. Transport during Spanish American War and then sold for junk in 1957. She had been used by the Alaska Steamship Co. It was the oldest passenger ship afloat being built of iron did not rust and made a good ship in the bearing Sea.

Donated by Dexter Bartlett.

VIA AIR

88

Ships

SS City of Los Angeles KOZC

Ex-German ship "Kron Prinz de Gross".
Duke Hancock Chief operator 2 years. Second op Cameron and 3rd op William Sommers.

2 KW 500 cycle quench spark and 5 KW Federal Arc.

VIA AIR

89

Ships

City of Honolulu taken the next morning Oct. 13, 1922 from the deck of the SS West Farallone KDSX

VIA AIR M

90

Ships - Shacks

Wireless Shack SS Lurline, 1912

VIA AIR

91

Ships

SS Korea

VIA AIR

92

SS Crook anchored at Anchorage, Alaska.

Dexter Bartlett photo

VIA AIR

93

Ships

SS West Farallone

Rescue ship for the City of Honolulu. Picture taken from the deck of the USAT Thomas.

VIA AIR

94

Ships

SS Northwester about 1913. Operator Gordon Haw.

Was B made trip to Rome 1917

VIA AIR M

95

Ships

SS Nevadan about 1912. Telefunker 2 KW spark set. Every time the transmitter was keyed the ships lights would go out.

VIA AIR M

96 97

RCA Hawaii

How the maste are erected at Koko Head. The masts arrived in short half sections. They are bolted together in the manner shown. The cage rises with the work. This method the mast construction is reliable and rapid. A 475 ft mast bing erected in four days.

VIA AIR M

U.S. Naval Ships stations

USS Oakland, 1918

VIA AIR

U.S. Naval Ship Shacks.

USS New Jersey, 1914.

This photo present an excellent
opportunity to compare the old and the new in Naval electronics.
On the left is the series antenna condenser used to tune the
higher wave lengths. The big switch is the wave changer.

VIA AIR

Ships

City of Honolulu KUSD

VIA AIR

Picture taken from the SS West Farallone KDSX.
SOS sent 800 miles out from Los Angeles with 5 KW
Poulson arc transmitter. 1922

Oct. 5, 1922 Operators, Walter P. Bell
H. Duke Hancock, William Gumlet. 2 KW Standard spark

102

U.S. Navy Shore Stations

VIA AIR

103

Naval Ship Stations

USS Cuyama, April 1917

Shown at the top, loading coil and transformer. The quenched gap is behind the blower.

VIA AIR

104

U.S. Naval Ships.

VIA AIR

USS Ward, Nov. 1918

Top left , pancake loading coil, next to it the RF ammeter, then the lightening switch . Underneath the loading coild is the coupling unit and wave changer.

In the lower left corner is the 500 cycle rotary gap, back of it the power transformer 20,000 v.

Next to the transformer is the quenched spark gap.

105

U.S. Naval Shore Stations

NPX loading coil about May 1920.

VIA AIR

106

U.S. ~~Xxx~~ Navy Shore Stations.

U.S. Naval Radio Station at Cordova, Alaska, 1918.

Operating position of Mile 14. Station could be controlled from Mile 7 at Valdez, Alaska.

VIA AIR

107

Navy Shore Stations

U.S. Naval Radio Station Point Arguello, Calif.

Shot of the old tower coming down.

VIA AIR

108

U.S. Naval Shore Stations.

NPK Point Arguello. Telefunken Equipment.

VIA AIR

109

U.S. Naval Shore Stations.

NSS Anapolis , Md. 1918 500 KW Arc. Solid metal m
magnet and field coil

VIA AIR

110

U.S. Navy Shore station

U.S. Naval Radio Station NPL
San Diego 1916. East tower 600 feet high.

VIA AIR

111

U.S. Naval Shore Stations

NPL San Diego 200 KW arc, 1918

VIA AIR

117

U.S. Naval Shore Stations

~~Nbout~~ about 1905

NPI Farrallon Island , just off the coast of San Franciso. On the left is the oscillation transfomer and Leyden jar condenser underneath. Below is the mercury interrupter used to break the primary of the transformer.

VIA AIR

113

U.S. Naval Shore Stations

NPL Pt. Loma about 1905

VIA AIR

Left coherer detector. On wall hot wire ammeters and in front of it the primary and secondary conductive coupled oscillation trnformer. Spark gap inside the muffler. Below it is the glass transmitting condenser, back of it the high voltage transformer. To the left of the condenser is the transmitting key.

115

U.S. Naval Shore Stations

NPE , North Head, Wash. 1915. Mike Esposito from Mare Island on the mast.

VIA AIR

115 116

U.S. Naval Radio Shore Stns.

U.S. Navy Shore Station Inglewood,
Calif. May 1920.

VIA AIR

117

U.S. Naval Shore Stations

Test Room at Mare Island Navy Yard 1919

How many of you could start the Arc ? First you bring up the DC voltage to about 500 volts, then turn on the alcohol or gas. Then when the chamer is clear of air you pushed in the cathode carbon rod which draws and arc. After it is going for a few minutes you shift over to the ignition keyer. Each keyed character would break the arc.

VIA AIR

114

Station in China put up b Joe Hallock

Chain of stations for the Chinese government. Bamboo scaffolding to erect a mast.

VIA AIR

119

U.S. Naval Radio Shore stations.

Mare Island Radio crew about 1922. These fellows put up the 400 ft wood towers and stations on the West Coast.
Back Row left to right, ninth man is "Charlie Gunderson", ship's carpenter. 11th man is O'Hara. Second row, left to right lith man Mr. Pratt. Front row left to right, "Mike" Esposito antenna rigg 25th Joe Ryall, leadingman antenna rigger. 26th man Gilbert W. Cattel in charge of the radio laboratory. 27th man Floyd Bunckly underwater sound and radio compass man. 28th man Bill Mcomber, radio shop supervisor . 29th man Robert B. Stewart, Distric RMO office manger and former Chief at NPL. 30th man George Kan O'Hara Master radio electrician.

VIA AIR M

32nd man James B. Upchurch, asst radio shop supervisor 34th Lei Kumilike asst radio laboratorian.

123

U.S. Naval Radio Shore Stations

Raising top most towr at
NPV Seward , Alaska 1917
Cliff Watson lead off ,an man

VIA AIR M

121 122

U.S. Naval Shore Stations.

Seward, Alaska. NPV

Picture of towers taken right after installation by Hallock and Watson in 1918. This US Naval Station was located about six miles out from town. The transmitter was a 5 KW quenched spark gap feeding into a six wire inverted "L" antenna. The operating and engine room building is shown on the right center. This station was part of the Sitka, Kodiak, Cordova and Dutch Harbor network

VIA AIR M

122 123

US Naval Shore stations

NPB, Sitka, Alaska 1918.

Operating position with new wave changer installed.
Federal receiver with marble panel and litz wire.

VIA AIR M

124

U.S. Naval Shore Stations.

Operating position ~~NKB~~ NPV 1918

De Forest Audion Box. and 5 Kw quenched spark gap. Two antennas were used for long and shorter waves.

VIA AIR

During the winter months, snow static was especially bad in Alaska where the installing engineers were snowed in. Sometimes they coulndt even contact a ship they could see coming in the harbor. Then on clear days they might work 1000 miles

U.S. Naval Shore Station

NPR Dutch Harbor, Alaska

On the left is the receiver. Near the front is the coil switch for 600 meters, 756 meters, 952 meters, 1200 meters and 2400 meters. These were called waves J,L,M,Q,P and so labeled. The station used a standard 8 wire antenna

VIA AIR

U.S. Navy Shore Stations

VIA AIR

U.S. Naval Radio Station FLZ at Croix D' Hins, France

This station ran a full one million watts in 1919.

Eight towers , 800 feet high.

Frwquency shift keying on about 15 kc. Station installed by Joe Hallock or the Poulsen arc.

U. S° Naval Shore Station

Loading coils at NPV, 1918. Operating position shows antenna switch insulators. These insulators were made by Telefunken and sealed with lethard and glycern. During their construction some water must have gotten seal inside. When engineer Watson cranked up the power, the steam genera ed blew the insulator apart and it went across the room through the wooden shack wall.

VIA AIR

Phillips Code book cover.

VIA AIR M